Amended Claims

Please replace the claims with those listed below, which listing supercedes and replaces all prior listings of claims:

1. (Currently Amended) In a digital data processor chassis of the type having a plurality of slots, each for slidable insertion of a respective circuit board, the improvement wherein

the chassis is any of vacuum or dip brazed, and wherein at least one slot comprises

a channel in which the respective circuit board is slidably inserted and which forms a substantially air-tight seal between the slot and the respective circuit board,

a first set of one or more air flow apertures disposed adjacent a location of a first edge of a plenum defined between a substrate of the circuit board and a cold plate mounted thereon and in thermal communication with the substrate and/or circuit components, in which plenum is ~~are~~ contained one or more circuit components of the respective inserted circuit board, and in which plenum is disposed one or more air flow-diverting elements configured to divert air flow to circuit components and/or regions of the circuit board requiring greater air flow and to divert air flow away from circuit components and/or regions of the circuit board requiring less air flow, the first set of air flow apertures comprising an air flow source for the plenum,

a second set of one or more air flow apertures disposed adjacent a location of a second edge of the plenum of the respective inserted circuit board, the second set of air flow apertures comprising an air flow exit for the plenum,

the first and second sets of air flow apertures being arranged to pass air flow through the plenum of the respective inserted circuit board, and at least one of the first and second sets of air flow apertures having plural air flow apertures,

at least one of the first and second sets of air flow apertures being sized so that, in conjuction with the air flow-diverting elements, an impedance to air flow passing through the respective inserted circuit board substantially matches impedances to air flow passing through one or more other boards inserted in one or more other slots in the chassis, which

one or more other inserted boards would otherwise have different impedances to air flow than the respective inserted circuit board.

2. (Original) In the digital data processor of claim 1, the improvement wherein the chassis comprises a cabinet with an air flow inlet.

3. (Previously Amended) In the digital data processor of claim 2, the improvement wherein the air flow inlet provides to the first set of air flow apertures cooling air flow drawn from an environment outside the cabinet.

4. (Previously Amended) In the digital data processor of claim 3, the further improvement wherein the second set of air flow apertures provides air flow to any of the environment outside the chassis or a region within the cabinet.

Claims 5 and 6 (deleted).

7. (Original) In the digital data processor of claim 1, the further improvement wherein the chassis is any of a vacuum or dip brazed.

8. (Currently Amended) A card cage for a digital data processor, comprising

a chassis that is any of vacuum or dip brazed, the chassis having a plurality of slots for circuit boards, each slot comprising

a channel in which a respective circuit board is slidably received and which forms a substantially air-tight seal between the slot and that respective circuit board,

an upper guide that receives an upper portion of a respective circuit board, the upper guide having one or more air flow apertures disposed adjacent a location of an upper edge of the respective circuit board,

a lower guide that receives a lower portion of a respective circuit board, the lower guide having one or more air flow apertures disposed adjacent a location of a lower edge of the respective circuit board,

the one or more apertures of the upper or lower guide comprising an air flow source for a plenum of the respective circuit board, which plenum contains circuit components and flow-diverting components, ~~circuit component-containing plenum of the respective circuit board,~~ , where the flow-diverting elements are configured to divert air flow to circuit components and/or regions of the circuit board requiring greater air flow and to divert air flow away from circuit components and/or regions of the circuit board requiring less air flow,

the one or more apertures of the other guide comprising an air flow exit for that plenum of the respective circuit board,

the first and second sets of air flow apertures being arranged to pass air flow through the plenum and at least one of the first and second sets of air flow apertures having plural air flow apertures,

at least one of the first and second sets of air flow apertures being sized so that, in conjunction with the air flow-diverting elements of the respective circuit board, an impedance to air flow of the respective circuit board substantially matches impedances to air flow to one or more other boards inserted in slots in the chassis, which one or more other boards would otherwise have different impedances to air flow than the respective circuit board.

9. (Original) A card cage of claim 8, the further improvement wherein the card cage is brazed.

10. (Original) A card cage of claim 9, the further improvement wherein the card cage is any of vacuum or dip brazed.

11. (Original) A card cage of claim 8, wherein a first slot and a second slot are arranged to be disposed on opposing sides of an air flow source.

Claim 12 (cancelled).

13. (Currently) A digital data processor comprising

a plurality of circuit boards, each of which comprises (i) a substrate, (ii) one or more circuit components mounted thereon, (iii) a cold plate that is mounted on the substrate and that is in thermal communication with the substrate and/or circuit components, the cold plate defining a plenum in which those one or more circuit components are disposed, (iv) one or more flow-diverting elements that are coupled to any of the cold-plate, the substate and/or the one or more circuit components, the flow-diverting elements being configured to divert air flow to circuit components and/or regions of the circuit board requiring greater air flow and to divert air flow away from circuit components and/or regions of the circuit board requiring less air flow,

a chassis comprising a covering and a plurality of slots for receiving the plurality of circuit boards,

each slot comprising

a channel in which a respective one of said circuit boards is slidably received and which forms a substantially air-tight seal between the slot and the respective circuit board,

an upper guide that receives an upper portion of a respective circuit board, the upper guide having one or more air flow apertures disposed adjacent a location of an upper edge of the respective circuit board,

a lower guide that receives a lower portion of a respective circuit board, the lower guide having one or more air flow apertures disposed adjacent a location of an lower edge of the respective circuit board,

the one or more apertures of the upper or lower guide comprising an air flow source for a circuit component-containing plenum of the respective circuit board, the one or more apertures of the other guide comprising an air flow exit for that plenum of the respective circuit board

the air flow apertures of the upper and lower guides being arranged to pass air flow through the plenum of the respective ciruict board, and at least one of the upper and lower guides having having plural air flow apertures,

at least one of the first and second sets of air flow apertures being sized so that, in conjuction with the one or more air-flow diverting elements of the respective circuit board, an impedance to air flow of the respective circuit board at least one of (i) substantially matches impedances to air flow of one or more other boards inserted in other slots in the chassis, and (ii) is sized in known relation to impedances to air flow of one or more other boards inserted in other slots in the chassis, which one or more other boards would otherwise have different impedances to air flow than the inserted board.

14. (Original) The digital data processor of claim 13, wherein

at least a selected circuit board comprises a plenum,

the air flow apertures of a slot in which the selected circuit board is inserted are arranged to pass air flow through the plenum.

15. (Previously Amended) The digital data processor of claim 14, wherein at least the selected circuit board comprises

a substrate and one or more circuit components thereon, and

a cover affixed to the circuit board, a plenum being defined in a region between the cover and the circuit board.

16. (Original) The digital data processor of claim 14, wherein the air flow apertures of a slot in which the selected circuit board is inserted are arranged to pass air flow through the plenum.

17. (Original) The digital data processor of claim 13, wherein at least one of the slots provides an air-tight junction with the respective circuit board.

18. (Original) The digital data processor of claim 13, the further improvement wherein the card cage is brazed.

19. (Original) The digital data processor of claim 13, the further improvement wherein the card cage is any of vacuum or dip brazed.

20. (Original) The digital data processor of claim 13, wherein the air flow inlet is centrally disposed on the chassis covering.

21. (Previously Amended) The digital data processor of claim 13, comprising a fan that any of pulls and pushes air through the chassis.